

What is claimed is:

1.

A method of detecting ammonia in aqueous systems, such as aquarium water, comprising:

obtaining a defined sample volume of the water to be tested; contacting the defined sample volume of water with a non-ammonia alkaline agent to raise the pH to at least 10; and

simultaneously contacting said sample with a film-like hydrophobic barrier membrane having a front side and an opposite side and capable of allowing ammonia to pass through from said front side to said opposite side of said membrane;

said membrane being coated with an excess of a pH chromogenic indicator mixture which responsively changes color upon contact with ammonia; and

observing the indicator color response on the opposite side of said membrane; and thereafter,

comparing the observed intensity of the color response with a standard color chart to determine the ammonia concentration of said water sample.

2.

The method of claim 1 wherein the membrane is affixed to a semi-rigid handle with the opposite side of the membrane being in juxtaposition with the handle.

3.

The method of claim 2 wherein the excess indicator, in addition to being incorporated in the membrane, comprises a thin layer thereof on at least the opposite side of the membrane.

4.

The method of claim 2 wherein the excess indicator, in addition to being incorporated in the membrane, comprise thin layers thereof on both the front and opposite sides of the membrane.

5.

The method of claim 1 wherein the non-ammonia alkaline agent in the reagent pad and barrier membrane are affixed to a clear semi-rigid handle.

6.

The method of claim 1 wherein the non-ammonia alkaline agent is a mix of calcium hydroxide, sodium hydroxide, and carbonates of calcium hydroxide and sodium hydroxide.

7.

The method of claim 1 wherein the hydrophobic barrier membrane is an inert porous polypropylene matrix.

8.

The method of claim 7 wherein the hydrophobic barrier membrane has a porosity of from 0.2 microns to 2.5 microns.

9.

The method of claim 8 wherein the hydrophobic membrane has a porosity of 0.6 microns to 1.2 microns.

10.

The method of claim 7 wherein the membrane is coated with a mixed indicator which is both responsive and discriminating in degrees of intensity to increasing levels of ammonia concentration.

11.

The method of claim 10 wherein the indicator is a mixture of bromophenol blue, bromocresol green, sodium salt and bromocresol purple, with total indicator undergoing a color change from yellow to green at differing pH levels.

12.

The method of claim 11 wherein the indicator pad is impregnated with an ethyl cellulose, a surfactant, and tertiary-octyl phenol to facilitate in transporting the ammonia through the membrane and to stabilize the indicators.

13.

A test device for detecting ammonia production potential of aqueous systems such as aquarium water, comprising:

a test strip having adhered thereto a reagent pad containing a non-ammonia alkaline agent sufficient to raise the pH of a confined test sample to at least 10; and an indicator pad adhered to said reagent strip, said pad comprising a porous hydrophobic membrane which allows ammonia gas to pass through to contact pH chromogenic indicator mixture on the back of the membrane which responsively changes color with the level of ammonia gas contacting it.

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